



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/547,397	04/11/2000	Hiroshi Satomi	862.C1898	4943

5514 7590 10/08/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

LIANG, GWEN

ART UNIT PAPER NUMBER

2172

DATE MAILED: 10/08/2003

25

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,397

Applicant(s)

SATOMI ET AL.

Examiner

GWEN LIANG

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 12-15 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12-15 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 23.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: Continued Prosecution Application in paper number 24, filed on 6/26/2003.

Specification

2. The disclosure is objected to because of the following informalities:

The word "provide" (page 2, line 23) contains typographic errors.

Appropriate correction is required to be made to the aforementioned and any other informalities existing in the disclosure.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

a step of adding or subtracting a value from the degree of matching calculated in advance based on the keyword calculation. Without this step, the selection step of "selecting output information from the plurality of candidate bodies of information based on arithmetic results obtained by performing the predetermined arithmetic operation for

Art Unit: 2172

substantially all keywords of each of the plurality of candidate bodies of information in said arithmetic step" and the output step of "determining a layout of the output information to be printed on a paper sheet based on the arithmetic results" do not conform to how the applicant's invention selects and determines a layout of the output information as disclosed in the specification (page 119);

a step of determining a layout of the input information together with the output information to be placed on a paper sheet. Without this step, the claimed step of "outputting the input information together with the output information placed on the paper sheet at the determined layout" is inoperative because no layout of "the input information together with the output information" is determined in the claimed output step, which the Examiner regards necessary for "outputting the input information together with the output information to be placed on a paper sheet at the determined layout".

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 12-15, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita (U.S. Patent No. 5,297,042), further in view of Salmon et al., "Salmon" (U.S. Patent No. 5,592,375), further in view of Johari et al., "Johari" (U.S. Patent No. 5,911,146), and further in view of Rapaport et al., "Rapaport" (U.S. Patent No. 5,890,152).

With respect to claim 1, Morita discloses a search method ... comprising:

a keyword list generating step, of extracting one or more keywords typically representing information corresponding to the input information and each of the plurality of candidate bodies of information, extracting a weight value that is set in association with the input information and each of the plurality of bodies of candidate information, and generating a keyword list (Abstract, "A document retrieval system includes an inputting unit for inputting a retrieval condition including one or a plurality of keywords and a weight value for each keyword..."); (col. 1 lines 36-39, "...a large number of fields [candidate information], each corresponding to one or more keywords, must be determined to correctly retrieve documents which are required by the user."); (col. 4

Art Unit: 2172

lines 10-12, "The weight data ... corresponding to the keywords K are supplied from the input analysis unit 1 ...") and

an arithmetic step, of executing a predetermined arithmetic operation for the weight value of each keyword of the input information and the weight value of each keyword of each of the plurality of candidate bodies of information ... (col. 2 lines 58-61, "The associative retrieval unit 2 calculates a relevance value of each document on the basis of the weight data Q_k , the relationship values and the importance values in accordance with predetermined equations [predetermined arithmetic operation]."); (col. 5 lines 25-30, "... the relevance value for each document is calculated on the basis of the relationship value between the keywords and the importance value [weight] of the keyword in every document and then the retrieval result in accordance with the relevance value for every document is obtained."); and

a selection step, of selecting output information from the plurality of candidate bodies of information based on arithmetic results obtained by performing the predetermined arithmetic operation for substantially all keywords of each of the plurality of candidate bodies of information in said arithmetic step (col. 2 lines 58-65, "The associative retrieval unit 2 calculates a relevance value of each document on the basis of the weight data Q_k , the relationship values and the importance values in accordance with predetermined equations. The relevance value of each document represents the degree of relevance in satisfying the user's requirement. The associative retrieval unit 2 supplies the relevance value of each document to the output controller 3."); (col. 4 lines 14-36, "The weight data Q_k ... is multiplied by the link factor W_{kj} in the keyword

connection link 9. ... In the j -th unit in the hidden layer 6, an addition for generating the sum of the n products $Q_k * W_{kj}$ ($k=1, 2, \dots, n$) which are supplied from n units in the input layer 5 via the keyword connection link 9 and a threshold processing are performed. ... In the i -th unit in the output layer 7, an addition for generating the sum of the n products $K_j * S_{ji}$ ($j=1, 2, \dots, n$) which are supplied from n units in the hidden layer 6 via the keyword-document connection link 10 ... are performed. Then the result D_i is obtained as the relevance value. That is, each unit in the output layer 7 outputs the relevance value D_i as the retrieval result.”).

However Morita does not explicitly disclose an output step, of determining a layout of the output information to be printed on a paper sheet based on the arithmetic results, and of outputting the input information together with the output information placed on the paper sheet at the determined layout, wherein the weight value is a numerical value with "-" or "+" given to each keyword in consideration of a respective universally accepted idea on the contents of each of the keywords, wherein the "-" and the "+" mean that the keyword has negative and positive contents, respectively, with respect to its corresponding one of the universally accepted ideas.

Salmon discloses an output step, of outputting the input information together with the output information ... (col. 6 lines 65-66, "Selected keywords may also be identified at this time for use in retrieval."); (col. 11 lines 66-67, "FIG. 7b shows choosing specific characteristics such as companies, educational institutions, or a keyword 704."); (col. 12 lines 24-26, "The Buyer's Interface displays those products [specific information] 720 with the close matches, along with the matching characteristics 722 [candidate

Art Unit: 2172

information].); (col. 12 lines 28-32, "The Buyer's Interface shows the Product Profile information 724 on chosen candidates, and indicates whether additional information is associated with the candidate's Product Profile. The buyer can display this additional information ...").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an output step of outputting the input information together with the output information as disclosed by Salmon into the search method as disclosed by Morita in order to allow the user to display additional information of interest, including multimedia information (col. 12 lines 31-32).

However the combination of Morita and Salmon does not explicitly disclose a step of determining a layout of the output information to be printed on a paper sheet based on the arithmetic results, wherein the weight value is a numerical value with "-" or "+" given to each keyword in consideration of a respective universally accepted idea on the contents of each of the keywords, wherein the "-" and the "+" mean that the keyword has negative and positive contents, respectively, with respect to its corresponding one of the universally accepted ideas.

Johari discloses a step of determining a layout of the output information to be printed on a paper sheet based on the arithmetic results (See for example: Abstract, "a computer-based system for automatic pagination and layout of yellow pages ... uses a simulated annealing heuristic to refine a randomly determined candidate solution. The text and advertisements which are to be included in the yellow pages directory are ordered in two distinct data streams representing the order of text and the order of

Art Unit: 2172

advertisements ...; The system determines a possible layout ... The solution is scored ... The revised solution is then kept according to a probabilistic formula relating the two scores ... Through an iterative process of perturbations, scoring, and comparing, the candidate solution becomes optimized. The process is repeated multiple times for different initial candidate solutions, ... A best solution is then selected from all of the optimized candidate solutions.")

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an output step of determining a layout of the output information to be printed on a paper sheet ... as disclosed by Johari into the search method as disclosed by the combination of Morita and Salmon in for providing a computer system for automatically paginating and laying out yellow page advertisements and text (col. 1 lines 10-14).

However the combination of Morita, Salmon and Johari does not explicitly disclose that the weight value is a numerical value with "-" or "+" given to each keyword in consideration of a respective universally accepted idea on the contents of each of the keywords, wherein the "-" and the "+" mean that the keyword has negative and positive contents, respectively, with respect to its corresponding one of the universally accepted ideas.

Rapaport discloses that the weight value is a numerical value with "-" or "+" given to each keyword in consideration of a respective universally accepted idea on the contents of each of the keywords, wherein the "-" and the "+" mean that the keyword has negative and positive contents, respectively, with respect to its corresponding one

Art Unit: 2172

of the universally accepted ideas (See for example: col. 6 lines 27-37, "Typically there are many key words and key phrases with corresponding signed weights contained in a particular Profile Object. The bundle of key words and key phrases may include positive weighted key words/key phrases, typically for synonyms. Negative weighted key words/key phrases, typically for antonyms, identify a particular identity, trait, interest or descriptive term that the Profile Object represents. These key words and key phrases have corresponding numerical values which are used to rate retrieved media files in terms of the user's interest.").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the weight value with positive or negative signs as disclosed by Rapaport into the search method as disclosed by the combination of Morita, Salmon and Johari, thus the keyword values are used to rate retrieved media files in terms of the user's interest (See for example; col. 6 lines 34-37).

Claim 2 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Morita discloses a method wherein the predetermined arithmetic operation is multiplication of the weight values, (col. 4 lines 14-16, "The weight data Q_k ... is multiplied by the link factor W_{kj} in the keyword connection link 9."); and

information corresponding to a large sum value of the arithmetic results is selected as the output information (col. 4 lines 28-34, "In the i -th unit in the output layer 7, an addition for generating the sum of the n products $K_j * S_{ji}$ ($j = 1, 2, \dots, n$) which are supplied from n units in the hidden layer 6 via the keyword-document connection link 10

Art Unit: 2172

and a threshold processing [for selecting large sum value] are performed. Then the result D_i is obtained as the relevance value.”).

Claim 3 is rejected for the reasons set forth hereinabove for claim 2 and furthermore the combination of Rapaport and Morita discloses a method wherein the weight value includes a sign determined in advance for each keyword (See for example: Rapaport, col. 6 lines 27-37), and when a result of the predetermined arithmetic operation for weight values of a set of keywords has a relatively large positive value, it is determined that a relationship is strong.. (See for example: Morita , col. 2 lines 58-63, “The associative retrieval unit 2 calculates a relevance value of each document on the basis of the weight data Q_k , the relationship values and the importance values in accordance with predetermined equations. The relevance value of each document represents the degree of relevance in satisfying the user's requirement [the higher the value, the stronger the relationship]”).

Claim 4 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Morita discloses a method comprising: an input step ...; and a first storage step ...; and second storage step.. (Abstract, “A document retrieval system includes an inputting unit [predetermined terminal] for inputting a retrieval condition including one or a plurality of keywords and a weight value for each keyword, an operating unit [management server] having first factors corresponding to relationship values, each relationship value being defined as a degree of the relationship between two keywords out of keywords which are predetermined in the document retrieval system and second factors corresponding to importance values [weight], each importance value being

Art Unit: 2172

defined as a degree of importance of a keyword [weight of keyword] in each one of a plurality of documents [stored candidate information] which are predetermined in the document retrieval system [information provider].").

Claims 12-15 and 21-24 are similarly rejected on grounds corresponding to the reasons given above for claims 1-4.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ogawa , U.S. Patent 5,020,019: A document retrieval system which includes a keyword connection table making section, a document accuracy calculating section, a document sorting section and a learning control section. The document accuracy calculating section calculates a document accuracy for each of the output documents in a prescribed manner by reference to a keyword connection table file.

Hattori , U.S. Patent 5,761,496: An information retrieval system which allows a user to retrieve information from databases, such as document bases or case bases; it is concerned with and intended particularly for a similar information retrieval system and its method which, upon receipt of a retrieval request from a user, allows him to retrieve information satisfying a retrieval condition included in the retrieval request. The retrieval request input means reads a retrieval request consisting of input keywords set up by the user as well as their importance degrees.

Satoh et al., U.S. Patent 6,014,672: A system which allows utilization of retrieval terms used in retrievals performed formerly by an outsider to facilitate and accelerate

Art Unit: 2172

retrieval of documents. A history retrieval section retrieves, in "retrieval which is performed utilizing a retrieval history", a retrieval history which satisfies designations of terms of an inputted retrieval item from among the retrieval histories by another retrieving person stored in the retrieval storage apparatus.

Tso, U.S. Patent 6,085,201: A context-sensitive template engine that helps users compose and/or reply to e-mail messages using minimal keyboard access. Given an input text passage, such as a portion of a partially-composed outgoing text message or a portion of a received text message, the template engine can suggest one or more predefined, context-appropriate sentences to include in the outgoing text message based on the actual content of the input text passage.

Sato et al., U.S. Patent 6,212,517: A system for providing keywords to facilitate a search in a text retrieval system.

Ushioda et al., U.S. Patent 6,602,300: An information retrieving apparatus that can output retrieved results corresponding to an input keyword even if the language of the input keyword is different from the language of a database from which data is retrieved.

Dreyer et al., U.S. Patent 6,088,710: A method for assembling fulfillment pieces with custom documents in an efficient manner. The fulfillment pieces, which may have fixed or variable information, are produced in line on the same press as custom documents, and the 'on-demand' fulfillment is accomplished by the manipulation of an original database containing recipient information.

Art Unit: 2172

Wilde, G.B. Patent 2,246,102: A page composition system that uses a graphic analyser to process images to be printed. Advertising text is entered and stored in text memory. Page layout parameters are also entered and stored.

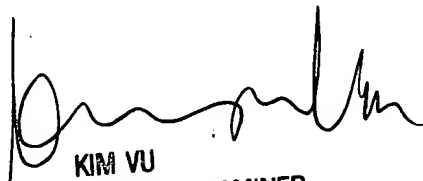
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 703-305-3985. The examiner can normally be reached on 9:00 A.M. - 5:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM VU can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

G.L.
September 29, 2003


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100